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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

(Chapter II of the Patent Cooperation Treaty)

(PCT Article 36 and Rule 70)

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| Applicant's or agent's file reference FP20062 | FOR FURTHER ACTION | See Form PCT/IPEA/416 |
| International application No. PCT/AU2004/000935 | International filing date (<i>day/month/year</i>) 9 July 2004 | Priority date (<i>day/month/year</i>) 11 July 2003 |
| International Patent Classification (IPC) or national classification and IPC Int. Cl. ⁷ B02C 4/28 | | |
| Applicant TECHNOLOGICAL RESOURCES PTY LIMITED et al | | |

1. This report is the international preliminary examination report, established by this International Preliminary Examining Authority under Article 35 and transmitted to the applicant according to Article 36.
2. This REPORT consists of a total of 3 sheets, including this cover sheet.
3. This report is also accompanied by ANNEXES, comprising:
 - a. ☒ (sent to the applicant and to the International Bureau) a total of 2 sheets, as follows:

☒ sheets of the description, claims and/or drawings which have been amended and are the basis for this report and/or sheets containing rectifications authorized by this Authority (see Rule 70.16 and Section 607 of the Administrative Instructions).
☐ sheets which supersede earlier sheets, but which this Authority considers contain an amendment that goes beyond the disclosure in the international application as filed, as indicated in item 4 of Box No. I and the Supplemental Box.
 - b. ☐ (sent to the International Bureau only) a total of (indicate type and number of electronic carrier(s)) , containing a sequence listing and/or table related thereto, in computer readable form only, as indicated in the Supplemental Box Relating to Sequence Listing (see Section 802 of the Administrative Instructions).
4. This report contains indications relating to the following items:

☒ Box No. I Basis of the report
☐ Box No. II Priority
☐ Box No. III Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
☐ Box No. IV Lack of unity of invention
☒ Box No. V Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
☐ Box No. VI Certain documents cited
☐ Box No. VII Certain defects in the international application
☐ Box No. VIII Certain observations on the international application

| | |
|---|---|
| Date of submission of the demand 9 February 2005 | Date of completion of the report 14 October 2005 |
| Name and mailing address of the IPEA/AU AUSTRALIAN PATENT OFFICE PO BOX 200, WODEN ACT 2606, AUSTRALIA E-mail address: pct@ipaaustralia.gov.au Facsimile No. (02) 6285 3929 | Authorized Officer JOHN DEUIS Telephone No. (02) 6283 2146 |

INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITY

International application No.
PCT/AU2004/000935

Box No. I Basis of the report

1. With regard to the language, this report is based on the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ This report is based on translations from the original language into the following language which is the language of a translation furnished for the purposes of:

☐ international search (under Rules 12.3 and 23.1 (b))

☐ publication of the international application (under Rule 12.4).

☐ international preliminary examination (under Rules 55.2 and/or 55.3)

2. With regard to the elements of the international application, this report is based on *(replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this report as "originally filed" and are not annexed to this report)*:

☐ the international application as originally filed/furnished

☒ the description:

pages 1-9 as originally filed/furnished

pages* received by this Authority on with the letter of

pages* received by this Authority on with the letter of

☒ the claims:

pages 10-12 as originally filed/furnished

pages* as amended (together with any statement) under Article 19

pages* 13-13A received by this Authority on 11 October 2005 with the letter of 11 October 2005

pages* received by this Authority on with the letter of

☒ the drawings:

pages 1/1 as originally filed/furnished

pages* received by this Authority on with the letter of

pages* received by this Authority on with the letter of

☐ a sequence listing and/or any related table(s) - see Supplemental Box Relating to Sequence Listing.

3. ☐ The amendments have resulted in the cancellation of:

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/figs

☐ the sequence listing (*specify*):

☐ any table(s) related to the sequence listing (*specify*):

4. ☐ This report has been established as if (some of) the amendments annexed to this report and listed below had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

☐ the description, pages

☐ the claims, Nos.

☐ the drawings, sheets/figs

☐ the sequence listing (*specify*):

☐ any table(s) related to the sequence listing (*specify*):

* If item 4 applies, some or all of those sheets may be marked "superseded."

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INTERNATIONAL PRELIMINARY REPORT ON PATENTABILITYInternational application No.
PCT/AU2004/000935**Box No. V** Reasoned statement under Article 35(2) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**1. Statement**

| | | |
|-------------------------------|--------------------|-----|
| Novelty (N) | Claims 13, 16-20 | YES |
| | Claims 1-12, 14-15 | NO |
| Inventive step (IS) | Claims 13, 16-20 | YES |
| | Claims 1-12, 14-15 | NO |
| Industrial applicability (IA) | Claims 1-20 | YES |
| | Claims | NO |

2. Citations and explanations (Rule 70.7)

The claims are not novel and lack an inventive step regarding the following citation:

DE 2910249 A (UKRAINSKIJ NAUTSCHNO-ISSLEDOVATELSKIJ INSTITUT METALLOV)
25 September 1980

Claims 1-12, 14-15

This document discloses a coating system for relining a roller whilst the roller is in use, wherein a metal is deposited onto worn metal portions via a spark producing electrode means.

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monitoring the surface of the roll or rolls and
determining the extent of wear on the surface of the roll
or rolls and identifying worn sections of the roll or
rolls and depositing the hard facing material onto worn
5 roll sections.

19. A roll crusher assembly for use in the mining
industry that includes:

- 10 (a) one or more than one roll for crushing a
feed material, the roll or rolls having an
outer surface that is formed from a wear
resistant material;
- 15 (b) a means for depositing a hard facing
material onto the surface of the roll or
rolls as the roll or rolls rotate during a
crushing operation; and
- 20 (c) a means for monitoring the surface of the
roll or rolls wherein the roll surface
monitoring means including a laser optical
continuous monitoring means that includes a
laser system mounted on a frame arranged to
25 minimise vibrations.

20. A roll crusher assembly for use in the mining
industry that includes:

- 30 (a) one or more than one roll for crushing a
feed material, the roll or rolls having an
outer surface that is formed from a wear
resistant material;
- 35 (b) a means for depositing a hard facing
material onto the surface of the roll or
rolls as the roll or rolls rotate during a

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crushing operation; and

- 5 (c) a means for heat treating the deposited hard facing material on the rotating roll or rolls downstream of the hard facing deposition means in the direction of rotation of the roll or rolls.
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